

Chapter 12: Recommended Strategies and Actions for Economic Sustainability

The research and analysis for the Economic Sustainability Plan resulted in a number of findings and identified many important issues. The key findings are summarized at the beginning of each chapter, and the previous chapter further develops some important integrated issues that cut across the various topics. This final chapter presents the specific recommendations that support economic sustainability in the Delta.

Although the focus of this plan is the Delta, it is also a part of ongoing statewide planning initiatives related to the broader State's interests in the Delta's water resources and ecosystem. The plan recommends many specific actions where the State's coequal goals of water supply reliability and ecosystem restoration are consistent with the requirement to restore and enhance the Delta, and also identifies some proposed strategies that have conflicts with economic sustainability. Overall, the recommended strategies are consistent with the coequal goals of the 2009 Delta Reform Act.

1 Levees and Public Safety Recommendations

Levees are the fundamental infrastructure that supports the Delta and its economy. Chapter 5 contains a detailed analysis of the levee system and related emergency response and public safety issues. Levee investments are essential to economic sustainability in the Delta and are the most cost-effective strategy to achieve water supply reliability.

- **Improve and maintain all non-project levees to at least the Delta-specific PL 84-99 standard, ~~using the existing Delta levee subventions and special project programs and U.S. Army Corps of Engineers (USACE) special funding.~~** This engineering standard has been developed and supported by numerous studies and should remain the basic standard for non-project levees. ~~These improvements are attainable and have economic benefits that exceed their cost, particularly when considered in the context of the systemic value of multiple infrastructure systems protected by the levee system. The cost of reaching this goal is attainable with current bond funds, USACE funding, and local cost shares.~~ Achieving this goal will increase water supply reliability, and will leverage the substantial benefit of federal support through USACE in the event of future levee failures. Project levees should also be improved as necessary and maintained to a similar standard.
- **Improve most “lowland” levees and selected other levees to a higher Delta-specific standard that more fully addresses the risks due to earthquakes, extreme floods, and sea-level rise, allows for improved flood fighting and emergency response, provides improved protection for legacy communities, and allows for growth of vegetation on the water side of levees to improve habitat.** Improvement of most Delta lowland levees and selected other levees to this higher standard would cost \$1 to \$2 billion in base construction costs over the cost of reaching the PL 84-99 standard. Including vegetation and habitat enhancement, total program costs might be in the order of \$4 billion, similar to the cost projected by the PPIC (2007) in their “Fortress Delta” alternative. While this is a longer-term program, planning should be initiated immediately.
- **Transfer to a regional agency with fee assessment authority on levee beneficiaries Responsibility for allocating funds for the longer-term improvement of Delta levees and the coordination of Delta emergency preparedness, response, and recovery ~~should be assumed by a regional agency.~~** The Delta Stewardship Council has proposed

the creation of a new agency, the Delta Flood Risk Management Assessment District, with fee assessment authority on levee beneficiaries including some beneficiaries that are not currently assessed for levee maintenance and improvement. In accordance with California Constitution Article XIII D sections 3 and 4, specific benefit assessment authority and approval must be in place before funding can be assured. Whatever agency is given these powers by the legislature should also be the vehicle for distributing any additional funds that are provided by the state and federal governments for levee investments. Formation of a new ~~state~~ agency, such as a JPA consisting of the five Delta counties, or adoption of these responsibilities by an existing ~~state~~ regional agency should have no impact on any existing liabilities associated with levee failures. This regional agency should place much more emphasis on preventative maintenance and inspections, flood fighting, and emergency response following earthquakes before any breach occurs than is currently the case. This agency would necessarily work in close cooperation with county, state, and federal emergency management programs and in particular would closely coordinate with the Department of Water Resources and the Bureau of Reclamation following single or multiple levee breaches as these organizations would continue to control water conveyance and upstream reservoir operations.

- **In addition to providing funding for longer-term levee improvements, provide ongoing funding ~~in the order of \$50 million per year~~ for regular levee maintenance and expanded emergency preparedness, response, and recovery.** This sum should cover ~~all levees in the legal Delta including project levees, nonproject and project levees as defined in Water Code sections 12980(e) and (f).~~ The division of this funding between regular physical maintenance of the levee system and emergency preparedness, response, and recovery should be determined by the regional agency that assumes responsibility for both these activities. A portion of these funds should be set aside each year for dealing with emergencies when they occur. Such annual funding should be in addition to an initial emergency fund contribution.
- **Reduce or eliminate regulatory impediments to action by the creation of a one-stop permitting system for selected activities within the Delta including dredging, levee construction, and ecosystem restoration.** Regulatory impediments add significant cost to these activities and reduction or elimination of these impediments will allow more efficient improvements and thus improve economic sustainability.

2 General Recommendations for Economic Sustainability

This section details several general economic development recommendations that span individual sectors.

- **Designate a regional agency to implement and facilitate economic development efforts.** Several of the analysis chapters, particularly the recreation and tourism analysis and legacy community chapter, identified a cross-cutting need for a regional organization to strategically organize and facilitate economic development activities. The task to facilitate economic development strategies should be placed within the Delta Protection Commission or joint powers authority (JPA) led by local governments. The main tasks of this entity are: marketing and branding, permitting and regulatory assistance, planning and coordination, and strategically managing the Delta Investment Fund. Section 1 of Chapter 11 provides more details on the needed duties of the organization and evaluates the pros and cons of several candidate entities to take on the role.

- ~~Compensate local governments for lost property taxes and assessments from habitat and development of facilities for export water supply~~ Economic impacts of habitat creation and development of facilities for export water supply should be fully mitigated. Local governments already face challenges delivering adequate public services to the rural Delta, and habitat development and other strategies could increase demand on local services while reducing the local tax base. Compensation for property taxes, assessments, and payments to property owners are essential parts of mitigation, but do not mitigate socio-economic impacts including lost income and sales in related industries and their associated tax revenues. Measuring and effectively compensating communities for dispersed and indirect net economic impacts is difficult, but should be further explored.
- **Land use planning and regulation must be clear and consistent across agencies.** The “covered action” component of the Delta Plan introduces a new element to land use planning that reduces local control and could increase uncertainty and risk to prospective investors. Increasing complexity of the Delta regulatory environment puts the Delta economy at a competitive disadvantage for new investment and will limit the ability of the Delta economy to evolve and be sustainable in a changing environment. It is vitally important that planning and regulation be consistent and coordinated across agencies.

3 Recommendations for the Economic Sustainability of Agriculture

Agriculture is the largest and most vital industry in the Delta. This section identifies the performance goal for Delta agriculture and several strategies to achieve it.

- **Maintain and enhance the value of Delta agriculture.** This goal is aligned with the performance measure in the Delta Stewardship Council’s Fifth Draft of the Delta Plan, and can be attained in a way that is consistent with the State’s coequal goals. The potential of other industries to replace any loss in economic output from Delta agriculture is limited.
- **Limit the loss of highly productive farmland to urbanization, habitat, and flooding to the greatest practical extent.** Some loss of farm land to these factors is inevitable, but continuing shifts of Delta agriculture to higher-valued crops and more value-added activities will compensate if land loss is not too great. To facilitate this goal, future development must be limited to the extent of current city limits, city spheres of influence, and unincorporated areas that are within urban growth boundaries such as urban limit lines, consistent with county general plans. ~~To facilitate this goal, future development must be limited to the extent of current city limits and spheres of influence.~~ In addition, habitat measures must target existing public lands, lower-value agricultural lands, and consider adjusting acreage goals as discussed in the habitat recommendations.
- **Protect Delta water quality and water supplies for agriculture.** Increasing salinity levels and interference with water supply and flow—whether through changes to standards, operations of water export facilities, or habitat development—will harm Delta agriculture production.
- **Support growth in agritourism.** Agritourism is currently a very small contributor to the Delta’s agricultural value, but is fast growing. Most agritourism is currently in the Secondary Zone close to urban areas, but could also be further developed in and around Legacy

Communities and focal point recreation areas. Local area plans should support agritourism where appropriate.

- **Support local value-added processing of Delta crops.** Yolo County's agricultural and industrial zone that facilitated local expansion of the successful Bogle Winery is an example of a successful strategy. In addition to local governments, regulations from state and federal agencies such as FEMA that inhibit investment in value-added processing should be examined and streamlined where possible. This could be a role for the regional economic development entity described in Section 2. ~~In addition to~~ Besides the growth in wineries, this strategy can be applied to other emerging sectors such as olive pressing. ~~that have growth potential in the Delta.~~

4 Recommendations for Economic Sustainability of Recreation and Tourism

Although recreation and tourism make a smaller contribution to the Delta economy than agriculture, it is a vital sector with growth potential that enhances quality of life for both residents and visitors. However, current trends in Delta recreation reveal signs of stagnation, and significant actions are required in order to capture the potential growth. Chapter 8 contains a detailed recreation and tourism enhancement strategy that contains 18 guiding principles developed to minimize constraints and take advantage of current and future influences and opportunities, resulting in five place-based strategies.

- **Protect and enhance private enterprise-based recreation with support from state and local public agencies.** Most of the economic activity related to recreation is generated by private enterprise. Public agencies can provide catalyst settings, recreation facilities, and infrastructure to improve access, enhance and create settings for private development, and services.
- **Focus recreation development in five location-based concepts:**
 - 1) Enhance Delta Waterways
 - 2) Develop Dispersed Points of Interest and Activity Areas
 - 3) Create Focal Point Destination Complexes with natural areas, parks, Legacy Communities, marinas, historic features, and trails
 - 4) Expand public access to Natural Habitat Areas
 - 5) Create recreation-oriented buffers at Delta urban edges
- **Implement Economic Sustainability Plan through specific strategies.** Recommended strategies include consistency planning and regulation refinement, coordination among state and local agencies, obtaining strategic levee protection for legacy communities and key recreation areas, designating a marketing and economic development facilitator, and providing key funding for catalyst projects and agencies.

5 Recommendations for Infrastructure

The Delta's natural resources and its central location in the Northern California megaregion support its role as an infrastructure hub of local, state, and national importance. Chapter 9 analyzes key components of the Delta's infrastructure services, and identifies several means to ensure these goals are achieved.

- **Planning of levee investments must fully consider the economic value of infrastructure services along with all other benefits.** Comparisons of levee costs to

farmland values substantially understate the value and importance of the levee system to the regional economy. Increased levee investment is needed to sustain critical energy, transportation, and water supply infrastructure.

- **All owners and operators of infrastructure that depend on Delta levees must contribute to levee system investment and maintenance.** Some infrastructure systems make little or no financial contribution to sustaining Delta levees. All infrastructure services, including transportation, energy, and through-Delta conveyance of water must support levee investment.
- **Protect and improve Delta water quality and supply for agricultural, municipal and industrial uses.** Both salts and organic carbon significantly increase costs for farms, households, business and industry, in and outside the Delta.
- **Ensure that future development of infrastructure in the Delta is aligned with economic sustainability strategies.** Infrastructure demands within and around the Delta will require significant future investment. For example, investment in Delta roads and highways should be integrated with strategies to enhance agriculture, recreation, ~~and~~ Legacy Communities, and emergency preparedness in the Delta, as well as ~~and~~ minimize conflicts between uses. This could be a role for the Regional Economic Development Entity.
- **Support expansion and development of the ports.** The Marine Highway Corridor initiative offers significant environmental and infrastructure benefits for the greater Northern California Region, and is catalyzing economic development around Stockton, Sacramento, and the state. More generally, development of these ports and marine facilities in the Pittsburg/Antioch area will support greater inter-regional integration, competitiveness, and economic development in the state.

6 Recommendations for Habitat and Ecosystem Improvements

Improving the Delta ecosystem is important to Delta communities, required by the coequal goals, and in some cases can benefit the Delta economy. However, there are some ecosystem proposals that can negatively impact the Delta economy and quality of life while having very uncertain benefits for the ecosystem. For example, the Economic Sustainability Plan finds that BDCP habitat proposals (not including conveyance) would reduce annual Delta agriculture revenues between \$33 million and \$137 million per year depending on how they are implemented. An evolving Delta economy could adapt to a \$33 million decrease in agricultural revenue from habitat development, but a \$137 million annual loss would create significant dislocation that could not be made up in other sectors. The wide variation shows the critical importance of considering Delta economic impacts when planning habitat projects.

- **Emphasize strategies with little or no conflict with the Delta economy.** Examples include increased fresh water flows, growth of vegetation on enlarged levees, restoration of mid-channel berms, and reactivation of upstream floodplains.
- **Expanded and enhanced flood bypasses can be consistent with economic sustainability if agencies work with local stakeholders to minimize and mitigate economic impacts.** Enhancing flood bypasses benefits fish and flood control, but can significantly impact agricultural production. The proposal to expand and enhance the Paradise Cut bypass in the South Delta is an example of an effective compromise between environmental groups and local landowners, and should be implemented.

- **Tidal marsh habitat plans should be significantly reduced, or eliminated in the interior Delta.** Conversion of agricultural land to tidal marsh habitat ~~in the interior Delta~~ creates significant economic, health, and water supply concerns with uncertain benefits for fish species. Tidal marsh would take high-value agricultural land out of production, negatively impact water quality for in-Delta and out-of-Delta users, increase seepage risks for nearby levees and lands, potentially increase water use, and create mosquito and vector control problems.
- **Increased open-water habitat in the interior Delta is not recommended.** Flooded islands in the ~~Central~~ Delta would create similar problems to tidal marsh, increase wave and seepage forces on adjacent islands, and could have other significant negative effects on recreational boating and existing marinas and recreational facilities. The ecosystem benefits of open water are uncertain.
- **Include recreation facility development in habitat enhancement plans when possible.** Habitat restoration plans should be aware of the recreation and tourism enhancement strategy and look for co-development opportunities.
- **Habitat restoration should start on State-owned land and only occur on private lands with willing sellers.** While willing sellers of habitat and easements are essential, it is important to note that compensating owners of land does not mitigate the socio-economic impacts of taking farm land out of production for habitat. In most cases, the loss in employee, supplier, and processor income in addition to other community spillover effects significantly exceeds the loss in farm income that is compensated through a voluntary sale.

7 Recommendations for Water Supply Reliability

Water supply reliability is required by the Delta Reform Act, but not defined. Reducing the risk of interruptions in water supply from earthquakes or floods is clearly one aspect of reliability, but there is debate about whether increasing reliability means increasing the quantity of water exported from the Delta or allows for decreasing it. The state policy to reduce reliance on the Delta suggests that lower exports from the Delta can be consistent with reliability as long as export supplies are more stable and secure. Regardless of the definition of reliability, sustaining and enhancing the Delta as a place requires consideration of the potential impacts of measures to improve water supply reliability on the Delta economy and quality of life. There are four primary areas of in-Delta impacts: water quality, land consumption by water supply infrastructure, visual and noise impacts of supply intakes, and the risk of reduced water quality or levee investments in the future.

- **Continuing ~~the a significant level of~~ through-Delta conveyance is important to economic sustainability in the Delta and can be consistent with water supply reliability within and outside the Delta.** The substantial levee investments recommended in the ESP will substantially increase the reliability of through-Delta conveyance at a much lower cost than isolated conveyance.
- **A dual conveyance plan with a large, 15,000 cfs isolated conveyance facility has large conflicts with Delta economic sustainability and has high risk for Delta stakeholders.** Even if water quality standards were maintained, a large facility would have significant agricultural impacts, as well as negative quality of life and tourism impacts. The biggest

long-term problem with isolated conveyance is the risk of lower water quality to maximize the value of the large facility to the exporters paying for the facility, and a reduced commitment to levee investment and maintenance by the State and water exporters that puts the Delta economy and other regional infrastructure at greater risk. ~~A 3,000 cfs isolated conveyance facility would have less risk for economic sustainability in the Delta.~~

- ~~Alternative options~~ **Options** to large isolated conveyance must be fully and consistently evaluated. In addition to through-Delta conveyance with the large levee upgrades, maintenance, and emergency measures recommended in this plan, these options include, but are not limited to a smaller-capacity ~~isolated conveyance~~ tunnel such as 3,000 cfs, the Delta Corridors plan, and proposals to move export intakes to the Western Delta in conjunction with additional south of Delta storage.

8 Recommendations for Research and Monitoring

The research for the Economic Sustainability Plan exposed some significant data and research gaps regarding the Delta economy and infrastructure systems. New data and research can help clear up points of disagreement and facilitate progress towards Delta solutions.

- **New recreation data is needed and should be updated regularly.** A key first step is to improve data on recreation and tourism use with an updated visitor survey and additional primary data collection that is repeated on five-year intervals. This data is crucial for future recreation planning and marketing, and could inform ecosystem restoration plans.
- **Maintain an Economic Sustainability Scoreboard to track progress.** Agricultural data is more available than recreation but should be consistently collected and compiled over time. Indicators for infrastructure, other economic sectors, and socio-economic status should also be developed and tracked to inform implementation of the plan.
- **The Delta Science Program should sponsor more engineering and economic studies in addition to ecological research.** Information gaps surrounding Delta levees, local economic impacts, and valuation of benefits, and costs of ecosystem restoration hinder Delta decision making and should be a higher priority for scientific research funding.
- Increase alignment among the various research and planning initiatives. Updates of the Delta Plan should consider periodic updates of the Economic Sustainability.